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ONTARIO ECONOMIC COUNCIL


ANNUAL REPORT
1975-1976



Ontario Economic Council

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March 31, 1976

The Honourable W. Darcy McKeough,
Treasurer of Ontario and
Minister of Economics and
Intergovernmental Affairs,
The Frost Building South,
Queen's Park,
Toronto, Ontario.

Dear Sir:

I have the honour to transmit herewith my annual statement on the activities of the Ontario Economic Council for the fiscal year ending March 31, 1976.

Sincerely,

A handwritten signature in dark ink, appearing to read "G. L. Reuber." with a stylized flourish at the end.

G. L. Reuber
Chairman

ONTARIO ECONOMIC COUNCIL

Report of the Chairman — 1975/76

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The Annual Report of the Chairman of the Ontario Economic Council has been prepared to acquaint members of the Legislature and the general public with the Council and its ongoing activities. This is the second such Report submitted by the present Chairman.

INTRODUCTION

The evolution of the Ontario Economic Council, our research program, and the organization of our activities were discussed in some detail in last year's Annual Report. As described there, in the autumn of 1973, the Council entered a new phase of its evolution as an independent research institute whose primary function, in the words of the Premier, "is the development of public policy." The Ontario Economic Council Act, 1968, sets out very broad terms of reference, embracing virtually all aspects of public policy. Under the Act, the Council may discharge its obligations in a variety of ways: by directly advising the Premier, individual Ministers, and the Cabinet, by undertaking and publishing research studies, and through a program of public education.

During the past year, the Council's research activities have developed along the general lines described last year and reviewed below in greater detail. Most of the short-term studies begun in 1974 have now been completed and the work associated with our longer-term research focus is well underway. This work has concentrated on six areas. Four of these are directly concerned with major areas of public expenditure in Ontario: health, urban development, education, and social security. The remaining two are concerned with the closely related fields of national independence and the development of northern Ontario. In considering each of these areas special emphasis has been given to two basic themes: the size, growth, and effectiveness of public expenditures; and the impact of policies in these areas upon the personal distribution of income and wealth.

During the past year policy papers were prepared in each of these areas, drawing together such knowledge and information as was available. The purpose of these policy papers was to highlight the principal issues, as we saw them, and to provide a framework for discussion about improvements in policies. We also offered suggestions which we believe warrant further examination for alternative policy approaches to these issues. As explained below, the Council itself has undertaken research to explore some of the questions that arise, which will be made public as it is completed. We hope that others, too, will be encouraged to study policies in these and related fields.

As is widely recognized, the most striking feature of public affairs during the past decade has been the rapid growth in the size and complexity of government. At present, government expenditure in Canada, at all levels, approximates 40 per cent of GNP compared to a little over 20 per cent in 1950. Immediately following the second world war, the expansion of governments' role was viewed mainly in terms of economic growth and improved economic stability. During the past fifteen years this role has been enlarged considerably to include, among other goals, concern for the distribution of income and assistance to low income groups in the community. This was explicitly recognized, for example, in the 1974 Ontario Budget, as well as in the Ontario Government's statement of principles for the development of an integrated social security system, issued in 1973.

Acknowledging the variety of considerations giving rise to policy changes and the relatively rapid growth and development of government programs, one can scarcely be surprised to find that these programs have not always been as fully co-ordinated as they might be, or that they have not always been as effective as expected in achieving their objectives, which themselves have often remained ill-defined. Moreover, because of their universal nature many of these programs have turned out to be very expensive. In addition, because of the incentive structure implicit in some of them, expenditures have tended to outstrip the willingness of governments, and ultimately the public, to fund them. Thus we have had periodic bouts of "cut, freeze and squeeze" — such as in 1969

and again today — followed by periods of renewed expansion: a pattern of “stop-go” Such instability not only results in wasteful public outlays but also creates serious problems for all concerned.

Within this general context, the Council’s policy papers were primarily concerned with ways and means of redesigning policies in those fields we have considered to make them more fully co-ordinated and consistent, more effective and efficient in achieving their goals, and more stable and sustainable in terms of cost through the system of incentives embedded in various programs.

These are large and difficult questions. We do not pretend to have all the answers; but a first step to finding better ones is to ask the right questions and to encourage informed public discussion.

The policy papers on national independence and the development of northern Ontario were similarly concerned with an appraisal of the benefits and costs of current policies, with a consideration of feasible alternatives, and with an assessment of the impact of current and prospective policies upon the distribution of income.

The Council has recently decided to phase down its work in these two areas during the coming year and to take up a new area of major interest — intergovernmental relations. There are a number of reasons for emphasizing this area. First, a large portion of federal-provincial fiscal relations consists of shared-cost programs in the health, education, urban development, and social security areas. The Council already has a substantial research effort underway which will add to our capacity to study the general topic of intergovernmental fiscal relations. Second, the recent heightened interest in patriating the Canadian constitution is likely to bring the debate concerning the division of governmental powers to the forefront once again. Third, recent provincial measures of fiscal restraint have raised, once more, issues of local autonomy and the need for fiscal independence.

The Council has also decided to prepare during the coming year a general overview paper concerned with Ontario’s economic prospects to 1984. The purpose of this paper will not primarily be to provide an economic forecast — though obviously any attempt to think about the future implies some view about how the economy will develop. Instead, the paper will attempt to identify some of the main economic problems which seem likely to call for policy attention over the next five to seven years.

As part of its long-term concern for the development of more and better information for purposes of policy analysis, the Council earlier organized a three-man Task Force to review the availability of useful information on local and regional government and to consider how the supply of such information might be improved. The Task Force completed its Report last summer. It has been submitted to the Government, which is now considering changes that are intended to improve basic information in this area.

The Council has also undertaken a number of activities designed to promote a greater awareness and understanding of public policy issues. As it did last year, the Council organized and sponsored a one-day conference at Toronto concerned with the economic outlook and other matters in 1976. Part of the conference consisted of panel sessions attended by outside experts to consider the questions raised in the various policy statements. These meetings generally elicited active discussion and interest. In addition, the Council convened a series of seminars over the year which brought together aca-

demics, officials from all levels of government, and experts from the private sector to discuss ongoing research projects.

Last June the Council made a five-day tour of northern Ontario. Meetings were held with local officials and other residents from Thunder Bay, Dryden, Kenora, Timmins, Moose Factory, and Sault Ste Marie, as well as from the areas surrounding these centres. The purpose of the tour was to provide an opportunity for face-to-face discussions on questions related to the development of northern Ontario between residents of the area and members of the Council and its staff.

As indicated in last year's Report, the Council issues two types of publications. The first consists of research studies published under the author's name through the University of Toronto Press. Although bearing the Council's imprimatur, the Council does not assume responsibility for the accuracy of the data or the analysis nor for the conclusions and policy judgments expressed. The same applies to the series of mimeographed working papers which the Council produces as an outgrowth of its research program.

The second category of publications includes policy statements by the Council (such as the series of "Issues and Alternatives" papers issued recently), an annual report, and other occasional documents.

Last year, as stated in the Annual Report, the Ontario Economic Council offered mainly plans and promises which it was acknowledged, would take some years to materialize. It was also recognized that only time would tell whether its plans and promises would be matched by performance. The progress made during the past year gives some reason for optimism that the Council's plans will in fact be largely realized and that, as stated last year, it can develop into a major public policy institute in this country, capable of making substantial contributions to the improvement of difficult social choices at all levels of government.

RESEARCH STUDIES AND RESEARCH PROJECTS IN PROGRESS

As mentioned above, those projects begun in 1974 are now all virtually complete. Four have been published as research studies, four have been issued as working papers, and the remaining six are still in progress but approaching the final stage of writing and editing. Five of the latter are described under the "General" section below. Also included in this category is a study commenced for the Council in 1975 by D.A.L. Auld. The remaining study begun in 1974, "The Size Distribution of Income: A Theoretical Survey" by C. M. Beach and F. R. Flatters, is described in the "Social Security" section; it is a companion study to the 1975 study by the same authors.

PUBLISHED STUDIES

A. Research Studies

1. *Economic Analysis of Environmental Policies*

D. N. Dewees, C. K. Everson and W. A. Sims.

A framework is concisely presented for the economic analysis of pollution problems and for evaluating proposed solutions. The substantial recent literature on environmental economics is reviewed and related to Ontario environmental policy. Topics include the theory of externalities as an explanation of environmental problems, policy objectives, cost of information and monitoring, and the impact of these costs on control policy selection. Three case studies of specific pollution problems — sulphur dioxide from a smelter, lead from downtown factories, and urban automobile emissions — are given, and possible solutions explored.

The authors' methodology is applicable not only to air and water pollution but also to noise, aesthetic degradation, and solid waste.

2. *Property Crime in Canada: an econometric study*

K. L. Avio and C. S. Clark

This is the first attempt, using Canadian data and econometric techniques, to study property crime as rational economic behaviour. Supply-of-offences functions for five types of property crime are specified and estimated using provincial data for 1970-2. The model and results of this study differ in several major respects from other published studies of supply-of-offences equations. Both the probability of apprehension and the probability of conviction are shown to have a substantial negative effect upon most kinds of property crime, with the conviction rate exhibiting the stronger influence. The generally significant inverse relationship between expected sentence length and the crime rate found by other researchers does not appear for the crimes investigated here. The results also indicate that estimating supply-of-offences functions over such aggregate categories as 'property crime' can lead to unjustified generalizations about particular types of crime.

Since most published studies use aggregate property crime as a dependent variable, these results also have implications for the design of future research.

3. *Tariff and Science Policies: applications of a model of nationalism*
D. J. Daly and S. Globerman

This analysis of economic nationalism is the first attempt to test empirically an economic model of nationalism, a model which implies that an emphasis on nationalism ultimately reduces economic efficiency — with low-income groups bearing most of the resultant cost — and redistributes income from lower- to upper-income individuals.

Applying the model to federal commercial and science policies, the authors argue that these policies have contributed to the high costs and low productivity of Canadian manufacturing and retarded the adoption of new processes and improved techniques. They find that the costs of these policies are borne by the urban worker and the consumer, while the major beneficiaries are Canadian managers, scientists, and engineers. The efficiency and competitive position of Canadian industry are reduced and income redistributed from lower- to upper-income groups.

Science policies designed to increase, at high cost, a broad range of Canadian research and development capabilities are related to the slower adoption of new manufacturing processes in Canada than in the United States and Europe. The authors conclude that greater trade liberalization and increased industrial specialization would benefit Canada, and Ontario; that more emphasis should be placed on rapid diffusion of innovation, and that research should be concentrated in fields where Canada has a potential competitive advantage.

4. *The Effects of Energy Price Changes on Commodity Prices, Interprovincial Trade, and Employment*
J. R. Melvin

This study investigates with interesting results, how an increase in the price of petroleum and natural gas would alter commodity prices in Ontario, and then estimates the effects on production and employment. A 100 per cent increase in energy prices is assumed. Using the Ontario input-output table it is found that commodity price increases would be relatively small, on average 2.7 per cent over-all and less than 1.6 per cent in basic manufacturing. However, using Cobb-Douglas utility functions it is also calculated that the Ontario labour force would suffer an employment reduction of 2 to 4 per cent.

Economic policy alternatives open to Ontario are then considered. Subsidies to offset commodity price increases would be very expensive and difficult to administer. Retaliatory measures, such as a change in the Ontario Corporate Income Tax, would be inefficient. It is concluded that from Ontario's point of view the best economic policy would be to attempt to ensure that petroleum and natural gas prices remain uniform throughout Canada.

B. Working Papers

1. *Some Preliminary Evidence on Family Income Concentration in Ontario*
H. M. Kitchen

This study involved an econometric analysis of a number of socioeconomic and

demographic variables which were assumed to have some impact on the inequality of family incomes in urban areas in Ontario for the year 1971. The Gini co-efficient (dependent variable) was employed as the measure of the degree of income inequality. Certain variables exerted a statistically significant effect on income inequality, although not all in the same direction. For example, the level of median income and the percentage of the population employed in manufacturing-related occupations both increased the level of income inequality. The remaining variables, (representing the ethnic composition of the population, the median age of the labour force, the percentage of the population over 65, the actual population of each urban centre, and the percentage of the people with a university degree) all reduced the level of income inequality.

2. *A Cross-Sectional Analysis of Canadian Public Attitudes Towards U.S. Equity Investments*

J. A. Murray and L. LeDuc

The principal focus of this research is the growth of Canadian nationalism and its influence on changing attitudes towards foreign investment. In order to measure this change in nationalism, results were examined from five consecutive annual surveys studying sentiments regarding US investment in Canada. Questions about policy options toward foreign investment were also examined. The data for the study consisted of 5,000 personal interviews across Canada over a five-year period (1969-73). The large sample allowed for regional comparisons in addition to demographic breakdowns in the analysis.

The principal findings indicate that although Canadians are thinking of the issue of US investment and its relevance to Canada, this issue does not have precedence over others such as inflation and unemployment. Generally, the reasons for viewing US ownership as a 'good' or 'bad' thing tended to be economic in character rather than social or political. In addition, the so-called third option (i.e. greater Canadian ties with Europe and Asia) was rejected by the majority of Canadians. Although some Canadians, particularly those in the western provinces, are willing to accept a lower standard of living in order to restore their independence, this was not an attitude shared by all Canadians. It would appear that Canadians who are optimistic about the economy tend to be less concerned about US investment and that those who are more pessimistic about the future are also more nationalistic in their outlook.

3. *A Research Agenda in Health Care Economics*

R. D. Fraser

This study is made up of three distinct parts. The first part provides an overview of the present state of knowledge of the economic activities that together constitute the health-care sector. This overview is carried out within the framework of "structure-behaviour-performance". This scheme, well developed in the study of industrial organization, is used experimentally to organize the available information on the nature of the health-care sector. The second part is concerned with the potential for research on the behaviour of the chief economic agents of that sector, namely, health-care personnel and, within this group, principally physicians. deci-

sion-makers in the hospital sector, the consumers of health care, and government. Finally, the third part of the study deals with the potential for research on three major problems that constrain the achievement of allocational efficiency within the health-care sector and on the problem of distributional "equity" in the consumption of health care services. The allocational problems evaluated are the organization of non-hospital ambulatory care, the potential for achieving greater substitutability among human health-care resources, and the process of research and development and the ways in which new technology might be most effectively introduced.

Choice of items for the research agenda was based on policy relevance, research tractability, and amenability to economic analysis. Two to three major research projects are suggested with respect to each of the eight research areas discussed. One overriding conclusion is that the sheer size of the health-care sector dictates a substantially increased research effort on health care economics.

4. *Student Loans: A Reappraisal*

E. G. West, assisted by M. McKee

This study analyses the theory of governments' potential comparative advantages in providing educational loans, and then investigates the current effectiveness of actual public loan schemes in Canada, the United States, and Scandinavia. It examines, with special emphasis, the student loan program available in Ontario.

The report points to crucial areas where it is believed that conventional public loan plans have become inefficient, and where it would be better to rely on alternative or modified systems. It is shown that a crucial weakness in Canada and the United States is the high and growing default rate. Reforms are especially urgent in view of the seemingly inevitable increase in student fees impending in Canada. Among the reforms discussed in this report are an extension of the period of repayment, a relaxation of the present rationing structure to allow more students to take advantage of loans, a system of graduated repayments that the student repays in proportion to a rising income, and a significantly improved machinery to cope with student defaults. The most novel of all the policies suggested is a 'graduate tax' system, which is similar to a loan system but uses the income tax authorities as collectors, to be applied, in the first instance, at the 'top end' of the student population — the post-graduate sector.

The critical review of the current economic philosophy of government intervention in the higher education sector with a special reference to the principles of equity and efficiency is relevant to federal government as well as provincial government deliberations. The predominant empirical feature of the report is the first intensive investigation by independent researchers into the particular reasons for student default in Ontario.

PROJECTS IN PROGRESS

A. General Projects

1. *Provincial Public Finances in Ontario: An Empirical Analysis of the Last Twenty-Five Years*
D. K. Foot

This project seeks to provide a detailed investigation of the public finances of the Province of Ontario over the past twenty-five years with a view to outlining the possibilities of developing a model capable of providing medium-term (five- to ten-year) projections under alternative assumptions. To be complete, any such model should reflect the three interrelated features of all public finances – revenues, expenditures, and financing. This study primarily focuses on the first two of these basic ingredients by compiling detailed, consistent, time series for numerous revenue and expenditure categories based on information provided in the *Public Accounts* of Ontario. These time series then form the basis for a detailed econometric analysis of the determinants of each category within the context of a complete model of provincial public finances. The underlying theory for the detailed revenue categories is primarily a rate-base model which relates collections to accruals and explains the growth of the base due to non-discretionary influences. Discretionary changes in the rates and bases are explicitly included as exogenous influences.

A set of regionally-specific alternative expenditure hypotheses are developed, and each expenditure category is tested against each of these hypotheses. The findings of the empirical analyses are then reviewed as a basis for medium-term projections of various categories of the public finances of the Province of Ontario.

2. *Exploitation of Ontario Mineral Resources: An Economic Policy Analysis*
J. C. Leith

This study is designed to set out the issues involved in public economic policy towards mineral resource exploitation in Ontario. It contains a review of the mineral sector to show how the sector has developed, its current significance on the provincial scene, and its major structural characteristics. The study sets out an economic policy framework that focuses on the case for policy intervention in the mineral sector. Finally, there is an evaluation of existing and alternative policies.

The main result of the study is that the set of economic policies currently employed by Ontario is not seriously out of line with an optimal set of economic policies. While there is room for improvement of some of the details of the policy instruments, there is no clear case for abandoning the current set of economic policies.

3. *Resources, Tariffs and Trade: Ontario's Stake*
J. R. Williams

The objective of this study is to further our understanding of Ontario's role in inter-

national trade, and thereby to contribute toward formulation of an Ontario position with regard to tariff policy.

The project emphasizes the role of the Canadian resource base as establishing a comparative cost advantage in certain industrial sectors. The results are based on input-output data specially prepared by Statistics Canada, industrial data, and tariff data for Canada, the United States, Japan, and the European Economic Community. The input-output data make it possible to determine the resource use of commodities. From the industrial data it is possible to determine the percentage of output in each industry produced in Ontario compared to the rest of Canada. Through the tariff data one can compare the tariff level by commodity in Canada to that of other regions. As a result of this analysis the author is able to make comparisons of the relative cost advantage in Canada and Ontario in various industrial sectors in so far as this is determined by the relative availability of resources.

4. *A Theory of the Expenditure Budgetary Process*
D. G. Hartle

This study consists of a review of the literature and the development of a conceptual framework for analysis of the budgetary decision-making process. In essence, the work suggests that existing theories of the budgetary process are woefully inadequate and that it would be more useful to look upon the questions involved from a games viewpoint — the transactions among the games played by politicians, bureaucrats, journalists, special-interest groups, and voters.

5. *Input-Output Analyses of Fiscal Policy in Ontario*
Edited by J. Bossons, with papers by R. M. Boadway, A. A. Kubursi, and J. M. Treddenick

Because of the diversity of effects of government policy, it is desirable to be able to obtain disaggregated analyses of changes in government fiscal policy. Input-output models provide a technique for making such disaggregated analysis; such models are being increasingly used for this purpose.

A description of the nature of input-output models, together with an evaluation of their value and limitations, is provided in an introductory essay by Bossons. Input-output models are based on some important simplifying assumptions. These assumptions make tractable the numerical analysis required to obtain solutions of disaggregated models, but require that users take care in interpreting the validity of conclusions reached using input-output models.

The basic input-output data for Ontario was originally obtained by the Ministry of Treasury, Economics, and Intergovernmental Affairs and published in the 1972 *Ontario Economic Review*. An adjusted and improved version, prepared by the Ministry, is published in this monograph.

The monograph contains several important extensions of input-output data which are required for analyses of the disaggregated effects of Ontario fiscal policy. These include: (1) the construction of detailed estimates of trade flows between Ontario and the rest of Canada, by Boadway and Treddenick, (2) estimation of the industrial composition of different components of government expenditures, by

Kubursi, and (3) estimation of the regional distribution of value-added and wage bills of each industry, also by Kubursi.

The data are used in several analyses of the effect of Ontario government fiscal policy. Boadway and Treddenick analyse the short-run effect of alternative tax changes on industry output and employment; this study indicates that tax changes with equal revenue implications may have substantially different short-run employment impacts and should motivate further work aimed at verifying the study's conclusions. Kubursi analyses the regional impact of different expenditure programs, indicating that virtually all Ontario government programs have increased the concentration of employment in the Toronto-centred region and accentuated regional income disparities. Kubursi next focuses on evaluating the efficiency of Ontario government expenditures, and arrives at the interesting conclusion that the increase in the share of government expenditures devoted to health over the last decade has resulted in an increased expenditure efficiency measured in terms of the impact on provincial income and employment.

The papers in this study rest on assumptions which are necessarily restrictive; their conclusions hence should be regarded as first approximations. Nevertheless, the conclusions are provocative and should motivate further work aimed at creating an improved data base with which more accurate disaggregated policy models can be constructed.

6. *Fiscal Knowledge and Fiscal Preferences* D. A. L. Auld

The purpose of this study is two-fold: to determine broadly the extent to which people in Ontario are familiar with certain aspects of local-provincial finance, and secondly to analyse individual preferences for particular public goods. The basic research instrument was a personal interview survey covering almost 1,300 households in Ontario. The results were then subjected to a number of statistical analyses.

The findings are difficult to summarize briefly since they encompass a large number of dimensions. Broadly, the findings showed that (1) there is considerable ignorance about those aspects of the public sector dealt with in the survey; furthermore, the degree or pattern of ignorance is not related to the characteristics of the respondents. (2) The pattern of fiscal preference did not vary appreciably; there was no strong consensus concerning too much or too little spending on a particular function, with the exception of administrative expenditure. (3) The age of the respondents and the size of their urban communities were the most frequent significant predictors of fiscal preference. (4) At best, the characteristics of the respondents explained 15 per cent of the variance in fiscal preference orientation.

B. **Health**

1. *Regionalization of the Health Care System* J. T. McLeod

The purpose of this study is to provide a critique of the proposals of *The Report of the Task Force on Health Planning* - The Mustard Report - on the basis of the

literature on regionalization, the experience of other jurisdictions with regionalization, and speculation on the main "behavioural" implications of the Mustard Plan. Although many of the conclusions reached in this paper are negative and raise questions concerning the viability of the Mustard scheme, the author is in general sympathy with the goals and the broad principles of Mustard's concept of regionalization. The author examines how regionalization might best be implemented and analyses some obstacles to its realization, as well as formulating alternative approaches to the decentralization of health services.

An introductory section assesses the explicit and implicit goals of regionalization of health services and reviews the literature on the subject. Succeeding sections examine the recent experience with regionalization in Manitoba, Quebec, and the United Kingdom, together with some of the apparent lessons or results of this experience. In the Ontario context, prior proposals of regionalized structures by the Smith Committee on Taxation (1967) place the Mustard scheme in historical perspective. Finally, the recommendations of the Mustard Report are examined in the light of the most likely behavioural responses of major components of the health-care system; major areas of potential conflict are identified; and suggestions are made as to how such conflict might be moderated.

2. *A Catalogue of Prevention Programs*

R. W. Morgan

The objective of this study is to compile a catalogue of preventative programs and to examine their rationale and their problems. The project will discuss criteria which should be applied in deciding whether or not to implement suggested new programs. As well as examining criteria, the document will attempt to predict some forthcoming advances in preventative tactics.

The methodology has involved an examination of morbidity and mortality data for Canada, some visits to health centres outside Canada, and a review of the methods of prevention available or proposed for every disease in the International Classification of Diseases.

3. *The Economic Impact of Limiting the Supply of Physicians and Hospital Beds in Ontario*

W. S. Comanor

This project is concerned with evaluating the effect on the quantity of medical services of limiting the supply of both physicians and hospital beds. Analysis of this subject has so far been limited to examining the impact of supply restrictions for physicians. These questions are investigated empirically with the help of a two-equation model. In the first equation, the determinants of the quantity of medical services provided are examined, with particular attention given to the separate effects of the number of GP's per capita and the number of specialists per capita. In the second equation, the determinants of both the number of GP's per capita and the number of specialists per capita are studied. The data used for this analysis have been collected by the Ontario Ministry of Health and applied to the nine payment districts in Ontario for each of three successive years.

Preliminary results indicate that the number of GP's in a district has a negative effect on the volume of physician services provided, while the number of specialists per capita in a district has a larger positive impact. What this suggests is that if the number of GP's per capita was reduced from its current level, holding the number of specialists constant, the volume of services would increase, while if the number of specialists per capita was reduced, holding GP's constant, the volume of services would decline. Alternatively, if the number of physicians is reduced while the current ratio of GP's to specialists is maintained, then this analysis predicts that the volume of services provided would also diminish. While it must be cautioned that these results are only preliminary, it does appear that the number of specialists is primarily responsible for the large volume of medical services provided. If this is true, then policy judgments regarding the volume of physicians must deal separately with specialists and general practitioners. Further analysis designed to distinguish the various types of medical specialists is proceeding at this moment.

4. *The Hospital Budgetary System in Ontario*
R. G. Milne

Health services involve a substantial provincial financial commitment, and hospitals appropriate a very large part of that cost. The objective of the study is to examine how the budgetary system is administered by the Ontario Ministry of Health and to determine how it could be modified to further reduce the cost of hospital care.

The study involves a description of the present budget review system. This has been completed. Ministry and other data related to the budgets awarded in 1972 will be examined to determine the size of the increases allowed and to identify the factors and parties in the review process which have had a significant influence on the size of the increase. Finally, some present budgetary proposals will be examined for their possible contribution towards reducing the cost of hospital care.

5. *Health Measurement and Health Care Planning in Ontario*
A. J. Culyer

This study investigates the role that health status measurements could play in the planning of Ontario's health services. The levels at which such measures have been claimed to be useful vary from the microscopic (in clinical practice and research) to macroscopic (sector planning and international comparisons).

The now quite extensive literature in medical, administrative, and economic journals will be reviewed, assessed and structured in such a way that it can be related to Ontario's current and prospective policy choices, to the federal context of health indicator development, and to the existing base of statistical information in Ontario.

A central part of the work will develop a planning algorithm that should enable easier communication between disciplinary groups, civil service and academic groups, professionals 'in the field', and planners.

6. *The Distributional Impact of Health Care Financing in Ontario: An Overview of the Study*

P. Manga

This study investigates the distribution of the costs and benefits of Ontario's hospital and medical insurance plans by income class. It also attempts to analyse these distributional effects by using important sociodemographic characteristics of the population (i.e. geographic location, age, and family size).

The core of the study is the estimation of the costs and benefits of the current hospital and medical insurance plans in Ontario by income class. The definition of "benefit" in this context is basically the value of services at current prices, costs, or fees, and not the value of some final measure such as "improved health".

The major difficulty faced in the estimation of benefit incidence is the absence of the required data base. Thus a survey has been undertaken to develop a micro-data base including the important sociodemographic and income information on a sample of OHIP families and some pertinent health-related data. The survey data are then merged with the utilization records of the Ministry of Health to generate the complete base for the estimation of the benefit incidence exercise.

The second part of the study will examine the determinants of health-care utilization in Ontario. Finally, a simulation model will be built to evaluate alternative financing systems for health services in Ontario.

7. *Issues, Decisions, and Information Requirements in the Extension of Provincial Health Insurance Programs to Cover Prescription Drugs and Dental Care*

R. G. Evans and M. F. Williamson

The study investigates the effects of introducing public pharmacare and denticare programs. It describes the relevant data necessary for proper program analysis, paying particular attention to areas where data is not currently available. The study also discusses feasible alternative public programs and their evaluation, and suggests ways in which evaluation might be improved. Due attention is paid to matching specific programs with public objectives.

Various arguments for public action in these areas are discussed, including risk-spreading, income redistribution, and increasing utilization of certain services by particular population groups. The various issues related to the efficiency and organization of the services' delivery system are also discussed.

8. *Physician Direct Billing of Patients*

A. Wolfson and C. Tuohy

The study examines empirically the behaviour of opted-out and opted-in Ontario physicians in terms of levels of services provided, the mix of services, their use of other health resources, cost per patient, encounters per patient, characteristics of physicians in terms of sex, date or place of graduation, and practice-type, and so on. The study presents the "political economy" of direct-billing and attempts to analyse the economic, political, social, and medical forces at work in determining the performance of this "private" sector in the health care system of Ontario. Much of the relevant data will be obtained through a survey of Ontario physicians. Some

supplementary information will be obtained from the Ministry of Health as well as the Medical Associations. The policy implications of the results are discussed.

C. Education and Manpower

1. *Labour Market and Other Implications of Immigration Policy*

W. Marr

The study addresses the effects of immigration on Ontario's labour market, and health and education systems. The federal Green Paper on Immigration is studied from an Ontario viewpoint, and a behavioural model of an economy and migration is developed. After establishing an immigrant data base for Ontario, the over-all effects of immigration on Ontario's economy are examined using an econometric model of this economy. The education system is examined to determine immigrants' participation at the elementary, secondary, and post-secondary levels. The migrants' use of health services is also investigated. Data sources include the Canadian Census of 1971, the report of the Canadian Immigration and Population Study, Ministry of Health records, the Toronto Board of Education Every Student Survey, and Department of Finance micro-data files.

A number of conclusions have already become apparent. Fewer immigrants to Ontario would probably lower slightly the unemployment rate and leave most measures of income almost unchanged. The distribution of immigrants to certain occupations has been different from that of the native-born; thus the immigrants' impact has been felt in different parts of the labour market. These conclusions differ, however, according to the period of immigration and birthplace. At the elementary and secondary school level, the foreign-born are distributed among academic streams differently than the native-born, and two main reasons seem to be the mother tongue of parents and child and the country or part of the world from which the pupil came. The labour market characteristics of the Toronto-based immigrant differ in many respects from the immigrant found in other parts of the province. This suggests policies based on sub-provincial units.

2. *Access to University*

J. Buttrick

This study makes use of Census data, records of students who have received honours graduation diplomas, data from the Ontario Universities' Application Centre, as well as evidence from the older Carnegie Study to describe the influence of the neighbourhood and school on university attendance. Some of the results are unexpected: girls receive higher marks in school but, even in Grade 9, have lower scholastic aptitude scores; in richer neighbourhoods the correlation between average marks and scholastic aptitude scores is higher than in poorer neighbourhoods; holding scholastic aptitude constant, a youngster is more likely to receive an Ontario Scholarship if he/she attends a school in a rich neighbourhood. Most of the results, however, are much as one would expect: holding scholastic aptitude constant, children from more affluent neighbourhoods are much more likely to remain in school through Grade 13 and continue into university. Indeed, 30 to 40 per cent of the

academically most promising youngsters in Grade 9 never reach Grade 13. And most of these promising but “screened out” children are from less well-to-do families and neighbourhoods. At the same time perhaps 20 per cent of low-achievement children (mostly from richer homes) do reach Grade 13.

The study also considers some of the policy options available to those who desire a more egalitarian society. The problem of change is judged to be difficult, since what parents are able to do for their children, including choosing a neighbourhood in which to live, seems to be crucial for the subsequent academic performance of young people.

3. *Interfaces Between Post-Secondary Education, Primary and Secondary Education and the Labour Market*

O. Hall and R. Carlton

The purpose of this study is to explore the interface between employing institutions and post-secondary institutions on the one hand and the framework of elementary and secondary educational institutions on the other. The central objective is to determine how good a fit there is between the needs of the former and the efforts by the latter to confer basic skills on the students.

The research involves, first, an effort to explore and document the experiences of employers who have hired young people who recently entered the labour market. The authors wish to discover what basic skills employers expect in their new employees, and how they adapt their employment practices to suit the kinds of applicants they encounter. The study also attempts to discover how the current crop of young people adapt to the requirements of the work situation, and how employers have adapted to any changes in the qualifications of their new workers. In pursuing this goal interviews were conducted among the various kinds of employers: those in industry, commerce, and services.

Second, it is intended to document the experience of young people who have chosen not to enter employment but to continue a post-secondary education. In this case it is important to discover how well prepared the candidates are for the educational programs they undertake, and how such programs have been adapted to recent applicants. The basic focus here is on the fundamental skills of young people entering college or university, and on any shortcomings that involve remedial programs by colleges and universities. As in the research among employees, the goal is to assess the fit between the qualifications of applicants and the demands of the programs of study.

Third, the schools and their environment have been explored in an attempt to discover the factors most directly related to variations in the acquisition of skills. To come is a study of changes in curricula, in pedagogical practices, and in criteria of evaluation. Emphasis on these aspects presumably will differ in the various schools in the system and they will be valued differently by teachers, students, and administrators. Eventually it should be possible to see how these factors are related to the development of the skills considered valuable by employers and their counterparts in post-secondary education.

Preliminary findings indicate that, in terms of recent high school leavers, employers are relatively satisfied with the kind of basic skills they possess, although

the demand for these skills within the work setting is really quite minimal. The employers are nevertheless concerned about what they perceive to be poor attitudes towards work on the part of these recent high school graduates.

Demand for basic skills is much greater in post-secondary institutions. There appears to be a general dissatisfaction with the skills of recent high school graduates, and an assortment of remedial programs is in existence. The demand for skills varies within each program, as does the recruitment of students. There is also evidence of programs being altered to respond to the level of skills of the incoming students.

D. Social Security

1. *Retirement Incomes and Public Policy*

J. E. Pesando and S. A. Rea Jr.

This project examines several important issues regarding government policies which concern, either directly or indirectly, the provision of retirement incomes. The analysis encompasses both public programs and the private pension system. The central issues in the analysis of private pension plans focus on the adequacy of statutory vesting and "locking in" provisions, together with the broader question whether the private pension system as currently constituted can remain viable in an inflationary climate. The analysis of public policy focuses on the financing of public pension plans, the income distribution effects of the Canada Pension Plan, and the incentive effects of public retirement programs.

The redistributational effects of the Canada Pension Plan are analysed with the use of a computer model that simulates the life histories of a large sample of Canadians. The results indicate that the CPP tends to transfer wealth to those with relatively high lifetime income.

2. *The Public Sector as an Employer of Last Resort*

A. J. Robinson

In the 1960s and 1970s, unemployment in Canada has been higher than in the early post-war years and higher than in most other western countries. The major explanations emphasize either shortages of supply of skilled labour in a technologically-oriented society or insufficiency of demand for labour in a capital intensive economy. One of the policies that has been suggested to cope particularly with the problem of insufficient demand for labour is public sector employment.

The main objective of this project is to study the feasibility and desirability of job creation programs as a means of reducing unemployment. The mechanics of implementing a public employment program are discussed and the potential implications for the private sector examined. Attempts are made to identify the gainers and losers from such programs and to estimate the consequences for national output of the growing public sector that a comprehensive public employment program would entail.

3. *Income Security in Ontario*

C. J. Hindle and C. Kapsalis

The objective of the project is to evaluate how satisfactorily present income-transfer programs cope with the problem of poverty and what changes may be necessary to remove apparent deficiencies of the present system.

Major attention is paid to the characteristics of the poor, such as the main reasons for poverty, and employability. Existing programs, as well as new ones — such as a wage supplement for the working poor — are evaluated in view of the characteristics of the poor. The study relies extensively on regression analysis and cross-tabulations of the 1974 Survey of Consumer Finances data.

4. *Day Care and Public Policy in Ontario*

M. Krashinsky

The objective of this project is to examine the growth of extra-family child care in Ontario and consider public policy towards day-care. At present, the government of Ontario regulates the provision of day-care and subsidizes its use by families in need. This study examines the rationale for various types of subsidy and their impacts on work incentives and public expenditures.

Use is made of data provided by the Labour Force Division of Statistics Canada, by the Ministry of Community and Social Services, and by the various local governments of Ontario. With the assistance of Metropolitan Toronto, new data have been compiled on the cost structure of private day-care centres. The study uses economic models of family and firm behaviour developed by the author to discuss various issues related to day-care.

The study concludes that although the policy of subsidies evolved by Ontario has been motivated by the highest ideals and undoubtedly has raised the standard of care received by many children, the present policy is both economically inefficient and inequitable and does not reach any more than a very small fraction of the children of working mothers. The project finds that public subsidies to children cannot be justified on the grounds of assisting poor mothers to work. Subsidies can be justified, however, as an aid to improving the welfare of all young children regardless of whether their parents work or whether they are cared for through formal day-care arrangements.

5. *The Size Distribution of Income: A Theoretical Survey*

C. M. Beach and F. R. Flatters

The purpose of this study is to summarize and synthesize various works on the theory of size distribution of personal income within a single, general framework, in order to provide some understanding of the interactions of the many different social and economic forces determining and altering the income distribution. This study is intended to direct policy-makers and researchers toward major issues and aid them in developing effective strategies for dealing with them. The study points to many important theoretical and empirical questions that should form the basis for research programs to aid in informing public discussion and policy-making with respect to income distribution issues in Ontario and Canada. What is the nature and

extent of inequality in wealth and various forms of income? How much of the measured inequality is due to real differences in lifetime incomes and how much to pure life-cycle demographic effects? How much inequality is due simply to differences in preferences of individuals and how much is to real inequalities of opportunities? What are the roles of inherited wealth, abilities, and social class in producing inequality of opportunity? How does the educational system influence the structure of incomes and wealth? The sort of policies required and the way in which they might be expected to affect the distribution of income and wealth depend very much on the answers that can be provided to these and similar questions.

6. *The Income and Asset Distribution Picture in Ontario*
C. M. Beach and F. R. Flatters

With the development of a fairly extensive body of social security and welfare legislation, the need arises on occasion for a review of existing programs, and consequently for an evaluation of the economic environment in which the programs operate. Clearly, the objective of many such programs is redistributive. To what extent do they help to equalize the distribution of income throughout the population? What effect do they have on redistributing the income throughout the life cycle to periods of relatively low family income and/or high needs?

The study reviews the current state of income distribution in Ontario, and then attempts through a series of adjustments and imputations to build up a more accurate estimation of the underlying distribution of real incomes for long run economic studies in Ontario. This involves a review of the asset and net worth position of different income groups, as well as the effect of life cycle upon measured inequality.

The first or descriptive portion of the study, which reviews the current state of income distribution in Ontario, has involved numerous cross-tabulations from the 1971 Census public-use sample tapes and from the Surveys of Consumer Finances tapes for 1970-4. The second major portion of this study focuses on the imputation and adjustments necessary to obtain approximate distributions of real incomes and long run economic status. The third major section of the study will examine the distributional impact of economic fluctuations.

E. **Urban Affairs**

1. *An Analysis of Speculation in Urban Land Markets*
D. T. Scheffman and J. R. Markusen

The purpose of this project is to develop an analysis of urban land markets, with special attention to be devoted to the effects of land "speculation". The theoretical analysis is devoted to constructing models of the land market permitting an assessment of the impact of speculation, government regulation, and the existence of market power. This analysis has shown that the existence of market power (i.e. concentrated land ownership) will have a significant impact on the timing of land development and the time path of prices. In the absence of concentrated ownership, speculation serves an economic function in the market, although unrealistic expectations by speculators can result in "speculative bubble" phenomena, at least

in the short run. The analysis of the Ontario Land Speculation Tax indicates that this tax may have undesirable long run effects by reducing the role of small speculators and increasing the role of large developers in the land development process.

The empirical analysis is directed at two issues. First, is there a "significant" concentration of land ownership in the Toronto area? To answer this question ownership is determined for a large sample (in excess of 71,000 acres) of potentially developable, undeveloped land which is about thirty to forty-five minutes commuting time from the roughly defined Metro core. This sample strongly indicates that there is *not* a significant concentration of land ownership for the general area outside Metro. (Both nominal ownership and ownership implied by "linkages" were determined.) However, it was found that ownership was fairly highly concentrated in individual regions. Whether or not this implies the existence of market power depends on the substitutability of land in different regions. The second part of the empirical analysis is directed at gaining understanding of the working of the development process. For this purpose, the history of four large land assemblies which are now at the subdivision stage was researched. From this sample one is able to see the role of "speculators" and developers and to measure capital gains.

2. *Residential Property Tax Relief in Ontario*

R. M. Bird

This study analyses the incidence and effects of two programs designed to relieve the burden of the residential property tax in Ontario: the Property Tax Stabilization Program and the Property Tax Credit. This analysis is preceded by a discussion of the structure of the property tax in Ontario and its incidence. Estimates of the incidence of the residential property tax in Ontario have been made under various assumptions. According to the traditional view of property tax incidence, the tax appears to be regressive at all income levels, while according to the so-called new view it is progressive for higher income groups and mildly regressive in the lowest income groups. The impact of the Property Tax Stabilization Grant on local taxes and expenditures has also been analysed using a simple model with cross-section data for fifty upper-tier municipalities in Ontario for 1973. Preliminary results indicate that provincial grants (including the Property Tax Stabilization Grant) have a positive effect on both expenditures and local tax rates. The study will be completed by an analysis of the impact of the property tax credit on the incidence of the property tax and on property tax levels.

3. *Housing Programs and Income Distribution*

G. B. Fallis

This project examines the impact of the housing-related activities of both the federal and provincial governments on the distribution of income in Ontario. Particular attention is paid to those housing programs which directly subsidize households and suppliers, and to subsidies inherent in the income tax system. Emphasis is placed on identifying the beneficiaries by age, family size, and income and on measuring the benefits simply as the difference between the market value of the services received and the payments made by beneficiaries. The analysis will use data supplied by the agencies responsible for the programs and data in the 1971 Survey of Consumer Finances.

In light of this analysis, there will be a discussion of alternative programs which might better achieve policy goals.

4. *The Market for New Housing in the Metropolitan Toronto Area*
R. A. Muller

This is a study of the industrial organization of the market for new housing in the Metropolitan Toronto Area, defined for statistical purposes as the Toronto Census Metropolitan Area. The project is designed to describe and document the operation of the market with particular attention to the supply of new housing. Special attention is given to the degree of market power available to large developers and the extent of supply constraints in the provision of serviced land. The conduct of firms and the performance of the market are evaluated, and implications for public policy are discussed.

The study draws on previous research, on interviews with developers and planners, and on the records of the Ministry of Housing. It concludes that concentration in the development of housing is low, that there is no evidence of collusion among firms, but that the timing of land development may be affected by the size of the company's holdings. There is evidence of substantial delay in the process of approving new residential developments.

F. **National Independence**

1. *Resource Use, Foreign Ownership, and Taxation: An Economic Analysis of Provincial Mining Policy*
P. G. Bradley

The objective of this research is to provide a clear statement of the economic issues central to provincial policy toward the mining industry. These include: (1) the identification of earnings in mining, in excess of a normal return on capital, which are attributable to the natural resource and which represent a distinctive tax base, (2) the extent to which special features of the mining industry cause foreign ownership to be particularly disadvantageous, and (3) the role of taxation policy, as it relates to the preceding items and to the division of resource revenues among different levels of government.

For the analysis to be pertinent, its assumptions must be realistic. One branch of the mining industry, whose major products are lead and zinc, has been examined. The principal research tool is a computer model in which production costs are estimated and compared with value of output. Federal and provincial tax receipts are calculated, with residual net earnings accruing to private investors, Canadian and foreign. The model thus provides a tool for examining the consequences of existing or proposed provincial tax policies, regarding both incentive effects and the distribution of any surplus resource revenues.

The model is a feasible policy tool, making it possible to estimate the magnitude of earnings attributable to natural resources and to observe the consequences of complex tax structures. Such a tool appears necessary if taxation is to be de-

signed to secure for the province a share of mineral resource revenues, while offsetting the disadvantages of foreign ownership and maintaining appropriate incentives for private investment.

2. *Financial Markets and Foreign Ownership*

J. C. Pattison

This study examines the financial factors which have influenced the changing levels of foreign control. First, the adequacy of aggregate domestic savings is examined, and the role of monetary and fiscal policy is explored. Second, general trends in the flow of funds in Canada are examined to show the origin and disposition of funds among deficit and surplus sectors. A discussion and brief analysis of the complex regulation of financial markets and the institutionalization of savings with reference to foreign ownership leads to a consideration of bank lending, equity markets, and underwriting. In the case of equity markets, the work has concentrated on the liquidity, depth, and continuity of the market, using data on a large number of trades of a wide range of volumes, prices, and market conditions for a broad selection of foreign and Canadian controlled firms. The banking section of the report considers both the supply and demand for funds for alternative uses by firms. Accounting information seems to indicate that Canadian-controlled firms are less desirable lending risks than foreign-controlled firms resident in Canada.

The study examines the over-all implications of the foreign control question and makes suggestions for provincial and federal policy and the coordination of such policy.

3. *Efficient Capital Markets and the Equity Capital Market in Canada*

C. C. Potter

The primary role of capital markets is to allocate the ownership of the economy's capital stock. In so doing they generate prices and yields that operate as signals for resource allocation by firms and individuals. Since the Canadian economy is faced with the prospect of having to invest hundreds of billions of dollars in the next ten years, it is imperative that securities' price signals be accurate, that is, that the market be efficient, so that security prices reflect all the available information on the underlying realities of the economy.

Little empirical work has been done in Canada on the efficiency of capital markets. Moreover, there is no consensus regarding the state of efficiency in Canadian markets. The objective of this project is to supply some direct evidence.

The data consists of the combined audited financial statements of all firms in manufacturing that were reported by the publication *Taxation Statistics* for the years 1955-64 and by *Corporation Financial Statistics* for the years 1965-71. These are segregated by taxable income/no taxable income, and by size category of total assets. For 1965-71, the data can also be segregated on the basis of resident and non-resident control. Other data relate to the Investor's Index of Statistics Canada for the years 1955 to 1971. This index is based on an averaging and weighting of the prices of eighty industrials on the last Thursday of each month.

The association between unexpected changes in the intrinsic value of the

representative manufacturing firm in each of the size categories (\$1-5 million; \$5-10 million; \$10-25 million, and over \$100 million) and unexpected price changes in the market index is examined. If the market is efficient, the information used in predicting the market index will be based on evidence of changes in the intrinsic value of the representative firm. Evidence includes the last fiscal period's audited statements, unaudited quarterly statements to date, reports from shareholder's meetings, special announcements, and more. If they are the true information set used by the market, then all the available information about changes in intrinsic value is taken into account by the market in setting a set of prices to clear the market.

The main results to date indicate that the Canadian market is two-tiered (1) for firms in the largest size category, security prices appear to fully reflect available information; (2) for firms in the \$25-100 million size category, the securities market appeared to be efficient in the period so far tested (1955-64) but it also appeared to offer significant opportunities for the exploitation of non-random trends.

4. *Transfer Pricing by Multinationals*

G. D. Quirin and G. F. Mathewson

This is an examination of transfer-pricing decisions involving movements of un-marketed goods and services between corporate affiliates in two or more countries. It examines conditions under which such prices will diverge from prices which would emerge in transactions between arm's-length firms. It also studies the effects the opportunity to manipulate transfer prices may have on the allocation of resources within a country and on the location of production and employment between countries. In addition it examines the impact of transfer pricing on tax or tariff revenues. Constraints on transfer pricing in Canada, the United States, the EEC, and certain other countries are examined to determine the extent to which they modify behaviour in this regard. Because information on transfer pricing tends to come to light only as a consequence of litigation, it is impossible to obtain data representative of normal practice in this matter. The study is based on numerical solutions to a series of models, the parameters of which are varied in such a way as to cover the range of likely cases.

Among the findings are (1) the opportunity to manipulate transfer prices gives multinationals a comparative advantage over domestic firms in the presence of tariffs and/or different rates of corporate income tax; (2) constraints on transfer pricing in advanced countries tend to reduce this advantage; (3) certain alternative tax structures would eliminate it entirely; (4) the basic result is to reduce the effectiveness of deliberately created trade barriers or tax incentives; and (5) the problem is most acute for countries with relatively weak tax-enforcement systems.

5. *Government Support of Scientific Research and Development: An Economic Analysis*

D. G. McFetridge

This study provides a critical examination of the role of government in the allocation of resources to scientific research and development in industry. The study

starts from the premise that state intervention can be justified only if it increases economic efficiency, and begins by examining the circumstances under which some kind of state participation in the allocation decision is efficient. The merits of alternative forms of state intervention, such as the provision of property rights to scientific discoveries and the subsidization of scientific research and development, are assessed. The efficiency implications of the arguments for state intervention which have been advanced by others are also examined.

The second section of the study is devoted to the development of the criteria to be satisfied by an efficient state subsidy to scientific research and development in industry. Among the issues discussed are the following: (1) Is it efficient to discriminate between foreign and domestic subsidy applicants? (2) Is it efficient to restrict exploitation of the results of subsidized projects to Canada? (3) Is it efficient to discriminate between exporting and non-exporting subsidy applicants? (4) How is the efficient subsidy size to be determined?

The final section of the study contains an analysis of the effectiveness of the existing subsidy system. Three complementary approaches are employed. The first is to determine the characteristics of subsidy recipients. If the latter have a common characteristic, a history of making losses for example, one can infer that the subsidy system is being used to achieve a goal (the support of failing firms in this case) other than that of encouraging R & D. To the extent that it is employed to achieve alternative ends, the subsidy system is less effective in its primary role, that of encouraging scientific R & D. The second approach is to see whether the subsidies have increased the value of the total resources allocated to R & D. A subsidy which does not have this effect has no reason to exist. The third approach is to determine whether reported R & D expenditures have any tangible results. This is the beginning of an effort to establish a link between reported R & D expenditures and subsequent social benefits. In the present study the existence of the first stage of this link, a relationship between reported R & D expenditures and subsequent patenting activity, is established. From the second and third approaches one can infer that subsidies increase R & D expenditures and that greater R & D expenditures result in greater patenting activity. Whether there is a concomitant increase in social benefit has yet to be ascertained.

The study concludes with a discussion of unresolved issues, and suggests productive areas for future development.

G. Northern Ontario

1. *Transportation Rates and Economic Development in Northern Ontario*

N. Bonsor

This study examines the structure of freight rates in Canada, with the object of determining whether or not rates for freight originating or terminating in Northern Ontario are at a level which is discriminatory. The data employed in the study pertains to rail and highway trucking rates in force during the summer of 1975.

The study reveals that the basic pricing principle used in rate determination is that of value-for-service. Regression analysis reveals that the average rate per ton

mile decreases as distance and weight increases. The level of rail rates for shipments originating in the major centres of Northern Ontario was not higher than for similar shipments originating in other parts of Ontario and the Province of Quebec. In some cases, rates from Northern Ontario were lower. This can be ascribed to the volume of freight, to the threat of competition from lake shipping, and, to a lesser extent, from highway trucking. The level of rates on inbound shipments tended to be much higher. In part this was found to be due to the low volume of inbound traffic.

With respect to the question of transportation subsidies, the study showed that a subsidy by itself may have little impact on the level of costs. It was concluded that transportation costs on those movements where rates were high can be expected to be lowered by the deregulation of the highway trucking industry. In Ontario, entry into the for-hire trucking industry is severely restricted, and this results in a level of highway rates significantly higher than the national average levels.

2. *Post-Secondary Education and Economic Development in Northern Ontario*
D. M. Cameron

The objective of this study is to examine the case for and against the differential treatment of post-secondary education in Northern Ontario, to ascertain the present degree of differential treatment, and to examine the effectiveness of both actual and desirable differential treatment. Information has been derived from interviews with university and college officials and from provincial documentary and data sources.

The study contains recommendations relating to the structure, organization, and financing of post-secondary education in Northern Ontario.

3. *Regional Policy Alternatives: A Study of Policy Efficiency for Northern Ontario*
D. F. Burgess and R. S. Woodward

The aim of this research is to assess the efficiency of various regional policies in achieving goals for Northern Ontario. The question of efficiency arises once it is recognized that regional goals frequently conflict with the goal of maximizing provincial economic growth or welfare. The problem is then to achieve the regional objectives at minimum cost to the rest of the province. In addition, the regional goals most frequently enunciated by northerners are interrelated. It is therefore important to understand how the pursuit of one goal may impair or enhance the ability to attain another.

The most important regional goals for Northern Ontario are taken to be these: (1) better employment opportunities, in particular reversing the emigration of skilled young people; (2) a wider, more diversified structure of economic activity in which processing as well as resource extraction occurs; (3) a greater variety of amenities, and the removal of infrastructural bottlenecks.

The research involves the investigation of the linkages between goals and policies using three different analytical models of the regional economy. These models are (1) a Weberian location model for an individual firm, (2) a general equi-

librium model which recognizes over-all regional constraints, and (3) a linear programming characterization. Some useful insights into goal-policy efficiency are achieved, and an ordering of first-best and suboptimal policies is established.

4. *The Industrial Structure of the Ontario Mining Industry*
S. H. Gill

The purpose of this study is to examine the structural features of Ontario's mining industry, with particular reference to metal mining in Northern Ontario. The primary objective is to ascertain the ways in which various aspects of industrial structure affect the stability of income and employment levels in northern communities heavily dependent on mining activities.

As well, this study examines the case for and against the encouragement of further processing of raw and semi-processed materials, as a possible solution to the cyclical movement of income and employment levels. This also involves a critical examination of existing public policies which intend to promote further processing.

ORGANIZATION AND ACTIVITIES

Outlook and Issues '76 Conference

On Monday, March 15, 1976, the Council held its "Outlook and Issues 76" Conference at the Hotel Toronto. The Conference was attended by some 350 senior business and labour leaders, academics, and members of the Legislative Assembly, as well as members of the media and general public.

Among the highlights of the Conference were the luncheon address by Paul W. McCracken, Past Chairman, President's Council of Economic Advisors, Washington, on "Government Spending: A Renaissance of Fiscal Discipline?" and the dinner address by John N. Turner, Partner, McMillan Binch, on "Reflections and Perspectives". The morning plenary session began with a comprehensive assessment of "The Ontario Outlook" by Robert R. de Cotret, President, The Conference Board in Canada, with a commentary by Andre Raynauld, Chairman, Economic Council of Canada. Jack L. Biddell, Member, Anti-Inflation Board, addressed the mid-afternoon session on "Wage and Price Controls".

In addition, there were three concurrent panels in the morning and three in the afternoon focusing on the policy papers in the areas of health, housing, national independence, social security, northern Ontario development, and education, which were released in February and March. The issues raised were examined by panelists from business, finance, industry, and labour, as well as by legislators and academics, with audience participation.

Plans are under way to hold a similar Conference in March 1977.

Meetings of the Council

In 1975-76 Council members participated in numerous meetings of Council committees concerning particularly the six policy papers. In addition, the Council met five times, as required under The Ontario Economic Council Act, 1968: February 17, April 14, June 19-23, October 25 and 26, 1975 and March 14, 1976.

Council Committees

The research program is organized under six committees of the Council. This structure makes it feasible for Council members to participate at some depth in the research program. Each Council member is on one such committee (one of them serving as Chairman) along with a staff member (serving as secretary) and the Research Director and the Council Chairman (who are ex officio members). The six committees parallel the six research areas. These committees are responsible for advising the full Council on the priorities within their respective areas. Apart from these duties, committee members participate in policy seminars, conferences, and other activities aimed at applying the basic knowledge derived from the research program to public policy issues of current importance. The composition of these committees is as follows:

HEALTH

E. A. Gullett
R. G. Hill

URBAN AFFAIRS

D. B. Archer
G. B. Fallis (OEC Staff)

P. Manga (OEC Staff)
J. T. Pennachetti (Chairman)
R. B. Taylor

EDUCATION AND MANPOWER

J. D. Gibson (Chairman)
H. C. Hatch
P. Joyal
R. N. McDougall (OEC Staff)

SOCIAL SERVICES AND TRANSFERS

R. C. Baetz
C. Kapsalis (OEC Staff)
J. C. McKibbin (Chairman)
D. C. Smith

W. F. McCormick
W. P. Wilder (Chairman)
D. M. Winch

NATIONAL INDEPENDENCE

L. K. Lodge
J. C. Pattison (OEC Staff)
A. E. Safarian (Chairman)
L. R. Williams

NORTHERN DEVELOPMENT

S. H. Gill (OEC Staff)
C. J. Carter (Chairman)
E. L. Hollingsworth
J. A. Stewart

Research Management Teams

While the Council committees provide the necessary interface between the research program and the full Council, the job of mounting and monitoring the research program falls to research management teams made up of Council staff and external experts. There are six such research management teams corresponding to the six areas of research interest. A link is maintained between the research management teams and the Council committees by the Research Director and the officer in charge of the particular research area. The present composition of these teams is as follows:

HEALTH

R. Evans (University of British Columbia)
R. Fraser (Queen's University)
J. Madden (University of Guelph)
P. Manga (OEC Staff)

EDUCATION AND MANPOWER

J. Buttrick (York University)
D. Dawson (McMaster University)
N. Meltz (University of Toronto)
R. McDougall (OEC Staff)

SOCIAL SERVICES AND TRANSFERS

T. Courchene (University of Western Ontario)
C. Green (McGill University)
C. Kapsalis (OEC Staff)
B. Spencer (McMaster University)

URBAN AFFAIRS

G. Davies (University of Western Ontario)
D. Dewees (University of Toronto)
G. Fallis (OEC Staff)
J. Hartwick (Queen's University)

NATIONAL INDEPENDENCE

M. Bucovetsky (University of Toronto)
D. McFetridge (Carleton University)
J. Pattison (OEC Staff)
T. Wilson (University of Toronto)

NORTHERN DEVELOPMENT

S. Gill (OEC Staff)
K. Loucks (Laurentian University)
A. Seuret (Lakehead University)
R. Woodward (University of Western Ontario)

Research management teams are responsible for the production of draft research agenda, the definition of particular studies, and the identification of researchers qualified to carry out studies. Once a study has been approved by the Council and entered into its research agenda, it is the responsibility of the staff to supervise its execution. Some study projects are carried out by staff members, other are commissioned to external researchers. In either case, the management procedures are the same.

MEMBERS OF THE COUNCIL

Members of the Ontario Economic Council are appointed by the Lieutenant Governor in Council for a period of up to three years. Members are eligible for re-appointment.

The present Chairman was appointed on October 18, 1973, for a period of three years.

The following are the current members of the Council with terms expiring December 19, 1976:

Dr Elizabeth A. Gullett
Associate Professor and Acting Chairman
Department of Consumer Studies
University of Guelph

Dr A. Edward Safarian
Dean, School of Graduate Studies
University of Toronto

Mr H. Clifford Hatch
President
Hiram Walker-Gooderham & Worts Ltd.

Dr David C. Smith
Head, Department of Economics
Queen's University

Mr Lorne K. Lodge
President and Chief Executive Officer
IBM Canada Ltd.

Mr Andrew Stewart
President
J. A. Stewart Co. Ltd.

Miss J. C. McKibbin
Administrative Officer
London Life Insurance Company

Mr William P. Wilder
Chairman
Canadian Arctic Gas Study Limited

Mr John T. Pennachetti
Chairman
General Concrete of Canada Ltd.

Mr Lynn R. Williams
Director, District 6
United Steelworkers of America

The following members were re-appointed for the period ending December 19, 1978:

Mr David B. Archer
President
Ontario Federation of Labour

Mr E. Lynn Hollingsworth
Vice-President
Soo Mill and Lumber Company Limited

Mr Reuben C. Baetz
Executive Director
Canadian Council on Social Development

Mr William F. McCormick
President
Glen Highland Holdings Limited

Mr J. Douglas Gibson
Financial and Economic Consultant and
Chairman,
The Consumers' Gas Company

Dr David M. Winch
Chairman, Department of Economics
McMaster University

Mr Rowland G. Hill
Vice-President and Canadian Regional
Director,
International Union of Operating
Engineers

The following new members were appointed for the period ending December 19, 1978:

Mrs Jalynn Bennett
Assistant Investment Officer
Canadian Securities Division
Manufacturers Life Insurance Company

Mr H. Fraser Dougall
President
The H. Fraser Dougall Co. Ltd.

Mr Robert R. de Cotret
President
The Conference Board in Canada

The terms of the following members expired in December 1975:

Mr Charles J. Carter
President
Great Lakes Paper Company Limited

Mr Robert B. Taylor
Chairman
Ontario Hydro Commission

Mrs Pauline Joyal
Social Worker
Ottawa, Ontario

The members of the Executive Committee are: G. L. Reuber (Chairman), D. B. Archer, J. D. Gibson, A. E. Safarian, J. Bennett, C. J. Hindle and T. P. Lonergan. Mrs Bennett replaces Mr Taylor, whose term expired in December 1975.

The Council wishes to express its sincere gratitude to those who have retired from its membership for their dedicated and conscientious service.

COUNCIL STAFF

The present management team consists of the Chairman (part-time), the Research Director and Executive Secretary, C. J. Hindle, (full-time), the Adviser, D. G. Hartle (part-time), and the Administrative Officer, T. P. Loneragan (full-time). Mr Loneragan joined the Council in November 1975.

As of March 31, 1976, the Council research staff was composed of the following:

Senior Research Officers	Research Officers	Research Assistants
George B. Fallis	Sym H. Gill	Aron Gampel
Pranlal Manga	Constantine Kapsalis	Louis Hui
John C. Pattison	Robin G. Milne	Lawrence Tsang
		Keith Weaver

During the year the following research staff changes occurred:

Robin G. Milne joined the Council as a Research Officer on September 1, 1975, on a one-year leave-of-absence from the Department of Political Economy, University of Glasgow, Scotland, Mr Milne is a graduate of the universities of Edinburgh and London. He has focused his attention on the health services area.

Anthony J. Culyer joined the Council staff as a Senior Research Associate for a nine-month period commencing January 2, 1976. He is on leave from the Institute of Social and Economic Research, University of York, England, where he is Assistant Director and Senior Lecturer in Economics. Mr Culyer holds an honours BA in Economics from the University of Exeter. His work is in the health field.

Calvin C. Potter joined the Council as a Senior Research Associate from September 1975 to January 1976, while on sabbatical leave from Concordia University, where he was Chairman of the Finance Department, Faculty of Commerce and Administration. He holds an M. Com. and Ph. D. from McGill University. His work is in the area of national independence.

The Council wishes to recognize the contributions made to its work by Ronald N. McDougall, whose appointment concluded in December 1975.

**An Act to establish the
Ontario Economic Council**

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1.	In this Act,	Interpretation
	(a) "Council" means the Ontario Economic Council;	
	(b) "Minister" means the member of the Executive Council designated by the Lieutenant Governor in Council to administer this Act.	
2.	(1) The Ontario Economic Council is established, consisting of not more than twenty-one members appointed by the Lieutenant Governor in Council, of whom one shall be designated as chairman.	Establishment
	(2) The Council may contract and may sue and be sued in its own name, and the members thereof are not personally liable upon any contract made by the Council.	Power to contract and sue
3.	(1) The chairman of the Council shall be appointed to hold office for a term of not more than five years.	Appointment, chairman
	(2) Each of the members of the Council shall be appointed to hold office for a term of not more than three years, except that of those first appointed not less than one-third shall be appointed for a term of one year and not less than one-third shall be appointed for a term of three years.	Members
	(3) A retiring chairman or other member of the Council is eligible for re-appointment to the Council in the same or another capacity.	Re-appointments
4.	It is the duty of the Council to advise and make recommendations to the Executive Council or any member thereof on methods for,	Duties of Council
	(a) encouraging the maximum development of the human and material resources of Ontario;	
	(b) supporting the advancement of all sectors of Ontario; and	
	(c) fostering conditions for the realization of higher standards of living for the people of Ontario.	
5.	The Council may,	Further duties of Council
	(a) conduct socio-economic studies in any area considered by the Council to be of concern;	

- (b) cause to be published such studies and reports as are prepared by or for the Council;
- (c) co-operate and maintain liaison with the Economic Council of Canada and bodies in other jurisdictions corresponding to the Council;
- (d) create an awareness and public understanding of provincial socio-economic issues by holding seminars and conferences;
- (e) create such committees as it considers desirable for the carrying out of its objectives; and
- (f) undertake such other duties as are assigned by the Lieutenant Governor in Council.

Salaries:
chairman

6. (1) The chairman of the Council shall receive such remuneration as the Lieutenant Governor in Council determines.

deputy
chairman

(2) The Minister may designate a member of the Council to be the deputy chairman who shall act in the absence of the chairman and may be paid such *per diem* allowance as the Lieutenant Governor in Council determines.

members

(3) Members of the Council, other than the chairman and deputy chairman, shall serve without remuneration but all members shall receive their reasonable travelling and living expenses while absent from their ordinary place of residence in the course of their duties under this Act.

Remuneration
for additional
duties

(4) Notwithstanding subsection 3, a member of the Council, other than the chairman and deputy chairman, may for any period during which he performs, with the approval of the Council, any duties on behalf of the Council in addition to his ordinary duties as a member thereof, be paid such remuneration therefor as the Lieutenant Governor in Council determines.

Staff
1961-62,
c. 121

(5) Such officers and employees as are necessary for the proper conduct of the work of the Council may be appointed under *The Public Service Act, 1961-62*.

Meetings

7. (1) The Council shall meet at least five times a year at the discretion of the chairman.

Quorum

(2) A majority of the members constitutes a quorum of the Council.

Expenses of
Council

8. The expenses of the Council in carrying out its objectives shall be paid out of the moneys appropriated therefor by the Legislature.

Commence-
ment

9. This Act comes into force on the day it receives Royal Assent.

Short title

10. This Act may be cited as *The Ontario Economic Council Act, 1968*.

PUBLICATIONS 1975-1976

ANNUAL REPORTS

Annual Report, 1974-1975

Annual Report, 1975-1976

POLICY PAPERS

Health:	Issues and Alternatives, 1976
National Independence:	Issues and Alternatives, 1976
Housing:	Issues and Alternatives, 1976
Northern Ontario Development:	Issues and Alternatives, 1976
Education:	Issues and Alternatives, 1976
Social Security:	Issues and Alternatives, 1976

RESEARCH STUDIES

Economic Analysis of Environmental Policies, by D. N. Dewees, C. K. Everson and W. A. Sims, 1976.

Property Crime in Canada: an econometric study, by Kenneth L. Avio and C. Scott Clark, 1976.

Tariff and Science Policies: applications of a model of nationalism, by D. J. Daly and S. Globerman, 1976.

The Effects of Energy Price Changes on Commodity Prices, Interprovincial Trade, and Employment, by J. R. Melvin, 1976.

WORKING PAPERS

Some Preliminary Evidence on Family Income Concentration in Ontario, by Harry M. Kitchen, June 1975 (1/75).

A Cross-Sectional Analysis of Canadian Public Attitudes toward U.S. Equity Investment in Canada, by J. Alex Murray and Lawrence LeDuc, June, 1975 (2/75).

¶ A Research Agenda in Health Care Economics, by R. D. Fraser, October, 1975 (3/75).

Student Loans: A reappraisal, with Special Reference to Ontario's and Canada's Changing Needs in Educational Finance, by E. G. West, December, 1975 (4/75).

GENERAL STUDIES

¶ Information: A Critical Component for Better Government. Report of the Task Force on Local and Regional Government Data, May, 1975.

The foregoing publications, with the exceptions noted, are available from the Ontario Government Bookstore, Toronto. The Working Paper series is available from the Council. The Research Studies series is also available from the University of Toronto Press, Toronto.

¶ OUT-OF-PRINT

